UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/779,858	02/17/2004	Frank Meyer	127525	6216

25944 7590 04/03/2007	EXAMINER
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320	PONIKIEWSKI, TOMASZ

	ART UNIT	PAPER NUMBER
	2165	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/03/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

	Application No.	Applicant(s)
Office Action Summary	10/779,858	MEYER, FRANK
	Examiner	Art Unit	
	Tomasz Ponikiewski	2165	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>08 January 2007</u>.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-10</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-10</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

        1.☒ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Remarks

1.   The Amendment filed on January 8, 2007 has been received and entered.

Claims 1-10 are pending.

Claim Rejections - 35 USC § 101

2.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

3.   Claims 5-6 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter.

Claims 5-6 do not list any hardware (i.e. computer) tied to the steps in order to

store results or operate the steps of the claims therefore resulting in software only

implementation. Claim should be amended to include some sort of computer or

hardware tied to the body of the claim to realize their functionality.

Claims 5-6 list computational steps in a program without tangible, useful,

concrete result because they do not specify an output at the end of the claims. It is

unclear what the end result of the steps of the claim is. The claim has no output or

storage to the final steps.

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5.   Claims 1, 5, 6, 10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification does not disclose a "calculator" as stated in the claims. As such the amendment is directed to a new matter not disclosed in the specification.

6.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7.   Claims 7-8 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

        Claim 7 recites the limitation "the symbolic values" in lines 4, 6. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation "the retained symbolic value" in line 11. There is

insufficient antecedent basis for this limitation in the claim.

Claim 8 recites the limitation "the other attributes" in line 3. There is insufficient

antecedent basis for this limitation in the claim.

Claim 10 recites the limitation "the other attributes" in lines 13 and 17-18. There

is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

8.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

9.   Claims 1-3, 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Kohavi et al. (US 6,278,464 B1) in view of Baatz et al. (US 2003/0115175 A1).

As per claim 1 Kohavi et al. is directed to A method of classifying multivalued

data stored in data a memory of a computer system in a descending hierarchy, each

datum being associated with particular initial values of attributes that are common to the

data, the method comprising recursive steps of subdividing data sets, wherein, during

each step of subdividing a set:

first, a calculator of the computer calculates discrete values for the attributes from

the particular initial values of the data attributes of said set (column 1, lines 44-45,

column 4, lines 50-65, wherein the labels are discrete values,

the memory is updated by adding the subsets in the descending hierarchy

(column 5, lines 29-34).

Kohavi et al. does not teach the calculator subdivides said set into subsets as a

function of a homogeneity criterion calculated on the basis of the discrete values for the

attributes of said set

Baatz et al. teaches the calculator subdivides said set into subsets as a function

of a homogeneity criterion calculated on the basis of the discrete values for the

attributes of said set (Baatz et al., paragraph 0005, lines 5-10).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the Kohavi et al. by teachings of Baatz et al. to include

the calculator subdivides said set into subsets as a function of a homogeneity criterion

calculated on the basis of the discrete values for the attributes of said set because it is

not dependent on predetermined information.

As per claim 2 Kohavi et al. as modified is directed to the step of calculation of

discrete values for the attributes, each initial attribute is transformed into a discrete

attribute (Kohavi et al., column 4, lines 50-51).

As per claim 3 Kohavi et al. as modified is directed to binary attribute values are

calculated from the particular initial attribute values of the data of said set, and wherein

said set is subdivided into subsets as a function of the binary values (Kohavi et al.,

column 4, lines 56-59).

As per claim 8 Kohavi et al. as modified is directed to said set is subdivided on

the basis of the discrete values of the most discriminating attribute, i.e. the attribute for

which a homogeneity criterion for all of the discrete values of the other attributes in the

resulting subsets is optimized (Kohavi et al., column 4, lines 59-65).

As per claim 9 Kohavi et al. as modified is directed to wherein, for any attribute,

the homogeneity criterion is an estimate of the expectation of the conditional

probabilities for correctly predicting the other attributes, given knowledge of this attribute

(Kohavi et al., column 4, lines 61-65).

10.   Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kohavi et

al. (US 6,278,464 B1) in view of Baatz et al. (US 2003/0115175 A1) and further in view

of Chickering (US 6,505,185 B1).

As per claim 4 Kohavi et al. as modified does not teach the step of calculating the

binary values for the attributes, for each attribute that is numerical, the median value of

the particular initial values of said attribute in the data of said set is estimated and in that

the value "true" is given to the binary attribute corresponding to said attribute for a

datum of said set if the particular initial value of the numerical attribute of said datum is

less than or equal to the estimated median value, else the value "false" is given thereto.

Chickering does teach the step of calculating the binary values for the attributes,

for each attribute that is numerical, the median value of the particular initial values of

said attribute in the data of said set is estimated and in that the value "true" is given to

the binary attribute corresponding to said attribute for a datum of said set if the

particular initial value of the numerical attribute of said datum is less than or equal to the

estimated median value, else the value "false" is given thereto (Chickering, column 10,

lines 5-12, wherein the equal or more is "true" and less than is given the "false" values).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine Kohavi et al. as modified by teachings of Chickering to

include teach the step of calculating the binary values for the attributes, for each

attribute that is numerical, the median value of the particular initial values of said

attribute in the data of said set is estimated and in that the value "true" is given to the

binary attribute corresponding to said attribute for a datum of said set if the particular

initial value of the numerical attribute of said datum is less than or equal to the

estimated median value, else the value "false" is given thereto because median

calculation is a well known function in the art.

Allowable Subject Matter

11.   Claims 5-7 and 10 would be allowable if rewritten or amended to overcome the

rejection(s) under 35 U.S.C. 112, 1st paragraph, set forth in this Office action. No art is

being presented.

Conclusion

12.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

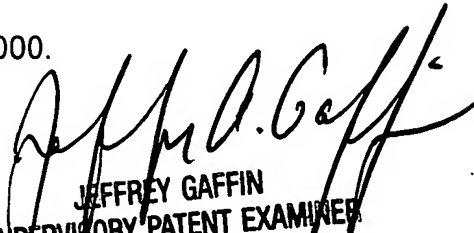than SIX MONTHS from the date of this final action.

13.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Tomasz Ponikiewski whose telephone number is

(571)272-1721. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Jeffrey A. Gaffin can be reached on (571)272-4146. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tomasz Ponikiewski
March 21, 2007

JEFFREY GAFFIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100